

Network Description Documentation

AAAU0001A

Network 2/ AAAUMA01A

Network 3/ AAAUMB01A

Network 4/ AAAUMC01A

Network 5/ AAAUMD01A



Prepared by:

USMC Network Design Facility
Marine Corps Tactical Systems Support Activity

7 February 2001

WARNING WARNING WARNING

Warning: Modification of this network by unauthorized personnel is in violation of the CJCSI 6232.021A (01 JUN 1998) on Deconfliction.

AAA0001A/USMC Networks 2, 3, 4, 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

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Section 1 – INTRODUCTION and PURPOSE

1.0 Introduction

USMC Networks 2, 3, 4 and 5 are variants of Army network AAAU0001A that was developed for joint training in the Ft. Bliss, Texas area. The networks will also support training in any operational environment.

The Marine Corps Network Design Facility developed USMC Networks 2, 3, 4 and 5 as variants of AAAU0001A to allow USMC JTIDS platforms, ADCP and JTAOM, as participants in the network using time slots of other service platforms when **those platforms are not active participants**. ADCP and JTAOM time slot assignments are as follows:

- AAAUMA01A/USMC Network 2: JTAOM(1) uses E3(2) time slots
- AAAUMB01A/USMC Network 3: ADCP(1) uses E3(2) time slots
- AAAUMC01A/USMC Network 4: JTAOM(1) uses CRC(1) time slots
- AAAUMD01A/USMC Network 5: ADCP(1) uses CRC(1) time slots

Participants				
Original	USMC Variants of Network AAAU0001A			
AAAU0001A	USMC Network 2	USMC Network 3	USMC Network 4	USMC Network 5
6 – PAT_ICC	6 – PAT_ICC	6 – PAT_ICC	6 – PAT_ICC	6 – PAT_ICC
1 – THAAD_TOC	1 – THAAD_TOC	1 – THAAD_TOC	1 – THAAD_TOC	1 – THAAD_TOC
2 – E3(1)	1 – E3	1 – E3	2 – E3(1)	2 – E3(1)
E3(2)	1 - JTAOM	1 – ADCP	E3(2)	E3(2)
2 – E3I(IJMS)	2 – E3I(IJMS)	2 – E3I(IJMS)	2 – E3I(IJMS)	2 – E3I(IJMS)
1 – JSTARS	1 – JSTARS	1 – JSTARS	1 – JSTARS	1 – JSTARS
1 – CRC	1 – CRC	1 – CRC	1 – JTAOM	1 – ADCP
1 – AMDPCS	1 – AMDPCS	1 – AMDPCS	1 – AMDPCS	1 – AMDPCS
1 - CEES	1 - CEES	1 - CEES	1 - CEES	1 - CEES

1.1 Purpose

The purpose of this documentation is to describe the USMC Networks 2, 3, 4 and 5 as variants of Network AAAU0001A. It was created to allow initialization and communications of tactical data between all participating units. This documentation and appropriate loading data is being delivered to the appropriate Marine Corps units and Joint Services. Each of the other services participating in this network should contact their appropriate Network Design Facility to acquire their loading media. The functional descriptions of each network are detailed in Sections 2, 3, 4 and 5 respectively.

AAAUMA01A/USMC Network 2
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Section 2

Network AAAUMA01A

USMC Network 2 – JTAOM(1)

AAAUMA01A/USMC Network 2
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

2.0 Executive Summary – AAAUMA01A/USMC Network 2

Network:	AAAUMA01A USMC Networks 2, 3, 4, 5	Created for:	East Coast Operations					
Use Limitations:	IPF OVERRIDE = 100/50							
Participants:	USMC Platforms	USN Platforms	USA Platforms	USAF Platforms	Other Platforms			
USMC Network 2	1 JTAOM		6 PAT_ICC 1 THAAD_TOC 2 FAAD 1 AMDPCS	1 E-3 2 E3I 1 JSTARS 1 CRC 1 CEES				
Operational Summary:	1. Highest Platform TSDF = 25.69%							
Network Requested by:	MACS-2 ATTN: 1stLt Smith							
Send comments and Recommendations to:	USMC Network Design Facility Attn: AD-09 (MCNDF) Box 555171 Camp Pendleton, CA 92055-5171 E-mail: mcndf@mctssa.usmc.mil Website: http://www.mctssa.usmc.mil Telephone: DSN 365-2796/2133 COMM (760) 725-2796/2133							

AAAUMA01A/USMC Network 2
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

2.1 USMC Network 2 Functional Description – JTAOM(1)

USMC Network 2 was developed as a variant of Army Network AAAUMA01A by the Marine Corps Network Design Facility to support joint ground and air training operations for USMC platforms. Network 2 variant allows JTAOM(1) to use E3(2) time slots as a participant in the network. The network participants are: PAT_ICC(1)/6, THAAD_TOC(1), FAAD(1)/2, E3(1), JTAOM(1), E3I(1)/2, JSTARS(1), CRC(1), AMDPCS(1) and CEES(1).

NOTES:

1. Network **IPF Override** is set to **3**, **TSDF** is set to **100/50**, **Communications Mode** is set to **Mode 1**, **TDMA Range** is **300 nmi**, **TSEC** and **MSEC** are set to **1**.
2. **JTIDS Voice communications** are not available in this network.
3. **JICO oversees all responsibility in managing network TSDF, NTR, and Relay assignments.**
4. **E3(1) and JTAOM(1) are the only relay platforms assigned in the network.**
5. **JTAOM(1) cannot be in the network if E3(2) is a participant.**
6. **JTAOM(1) Surveillance transmissions are not relayed.**

2.2 Operational Summary

1. 100/50.

All participants do not have line of sight with every other participant. **Only E3(1) or JTAOM(1) will perform relay functions as designated by JICO.**

2.3 Use Limitations

1. 100/50 IPF

2.4 Participants

<u>USMC Platforms</u>	<u>USN Platforms</u>	<u>USA Platforms</u>	<u>USAF Platforms</u>	<u>Other Platforms</u>
1 JTAOM		6 PAT_ICC 1 THAAD_TOC 2 FAAD 1 AMDPCS	1 E3 2 E3I 1 JSTARS 1 CRC 1 CEES	

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2.5 Network Participation Groups

NPG #3 (RTT-B)

Participants:	All units, except E3I(1)/2 IJMS
Access:	Contention access 4
Capacity:	8 total slots
Assigned Net:	0

NPG #6 (PPLI-B)

Participants:	All units, except E3I(1)/2 IJMS
Access:	Dedicated
Capacity:	16 total slots
Assigned Net:	1
Relay:	E3(1) and JTAOM(1)
Packing Limit:	P2SP

NPG #7 (Surveillance)

Participants:	PAT_ICC(1)/6: transmit/receive THAAD_TOC: transmit/receive FAAD(1)/2: transmit/receive E3(1): transmit/receive. Own surveillance is not relayed. Relays all other platform's surveillance except for JTAOM(1)'s surveillance. JTAOM(1): transmit/receive. Own surveillance is not relayed. Relays all other platform's surveillance except for E3(1)'s surveillance. JSTARS: transmit only. Own surveillance is not relayed. CRC: transmit/receive AMDPCS: receive only CEES: receive only
Access:	Dedicated
Capacity:	320 total slots
Assigned Net:	1
Relay:	E3(1) and JTAOM(1)
Packing Limit:	P2SP

NPG #8 (Weapons Coordination and Mission Management)

Participants:	PAT_ICC(1)/6: transmit/receive E3(1): transmit/receive. Own transmit is not relayed. Relays all others except JTAOM(1). JTAOM(1): transmit/receive. Own transmit is not relayed. Relays all others except E3(1). JSTAR/CEES: receive only CRC(1)/AMDPCS(1): transmit/receive
Access:	Dedicated

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Capacity: 48 total slots
Assigned Net: 1
Relay: E3(1) and JTAOM(1).
Packing Limit: P2SP

NPG #10 (Electronic Warfare)

Participants: E3(1), JTAOM(1), JSTARS(1), CRC(1): transmit/receive
CEES: receive only
Access: Dedicated
Capacity: 16 total slots
Assigned Net: 1
Relay: None.
Packing Limit: P2SP

NPG #29 (Residual Messages)

Participants: E3(1), JTAOM(1), JSTARS(1): transmit/receive
Access: Dedicated
Capacity: 12 total slots
Assigned Net: 1
Relay: None.
Packing Limit: P2SP

NPG #30 (P-Messages)

Participants: All units transmit/receive, except for CEES(1) is receive only.
Access: STD
Capacity: 16 total slots
Assigned Net: 0
Relay: E3I(1)/2
Packing Limit: Standard

NPG #31 (T-Messages)

Participants: PAT_ICC(1)/6 and FAAD(1)/2: transmit/receive
JTAOM(1), E3I(1)/2, and JSTARS: transmit/receive, but not relayed.
E3(1), AMDPCS(1) and CEES(1) are receive only.
Access: STD
Capacity: 480 total slots
Assigned Net: 0
Relay: E3I(1)/2
Packing Limit: P2SP

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APPENDIX A – AAAUMA01A/USMC Network 2

CONNECTIVITY MATRIX
PULSE DENSITY REPORT
ALLOCATION TABLE
COMSEC CROSS REFERENCE TABLE
TIME LINE DISPLAY
NDL FILENAME TABLE

AAAUMA01A/USMC Network 2
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Connectivity Matrix – AAAUMA01A/USMC Network 2

Slot Group			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
NPG Number			3	6	TY	7	TY	7	7	8	TY	8	10	29	P	TY	T	TY	T	
Net Number			0	1	1	1	1	1	1	1	1	1	1	0		0		0		
TSEC Variable			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
MSEC Variable																				
Access Mode			4	D		D		D	D	D		D	D	D		D		D		
Packing Limit				P2SP		P2SP		P2SP	P2SP	P2SP		P2SP	P2SP	P2SP	STD		STD		STD	
Per Unit Slots/Frame				1		24			32	4		8	4	4	1		36		48	
Total Slots/Frame			8	16	16	240	240	16	64	32	32	16	16	12	16	16	288	288	192	
Participant ID	Net Entry Transmit Enabled	Default Net	Connectivity																	
1.PAT_ICC(1)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
2.PAT_ICC(2)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
3.PAT_ICC(3)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
4.PAT_ICC(4)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
5.PAT_ICC(5)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
6.PAT_ICC(6)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
7.THAAD_TOC(1)	Y	10	T	T/R	R	T/R	R	R							T/R	R				
8.FAAD(1)	Y	1	T	T/R	R	T/R	R	R							T/R	R	T/R	R	R	
9.FAAD(2)	Y	1	T	T/R	R	T/R	R	R	R						T/R	R	T/R	R	R	
10.E3(1)	Y	1	T	T/R	Y	R	Y	R	T/R	R	Y	T/R	T/R	T/R	T/R	R	R	R	R	
11.JTAOM(1)	Y	1	T	T/R	Y	R	Y	R	T/R	R	Y	T/R	T/R	T/R	T/R	R	R	R	T/R	
12.E3I(1)	Y															T/R	Y	R	Y	T/R
13.E3I(2)	Y															T/R	Y	R	Y	T/R
14.JSTARS(1)	Y	1	T	T/R	R	R	R	T	R	R	R	R	R	T/R	T/R	T/R	R	R	T/R	
15.CRC(1)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R	T/R		T/R	R	R	R	R	
16.AMDPCS(1)	Y	1	T	T/R	R	R	R	R	R	T/R	R	R			T/R	R	R	R	R	
17.CEES(1)	Y	1	T	R	R	R	R	R	R	R	R	R	R		R	R	R	R	R	

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Pulse Density Report – AAAUMA01A/USMC Network 2

Check for active platform	Participant	Data Without Relay	Data With Relay
	PAT_ICC(1)	4.40%	4.40%
	PAT_ICC(2)	4.40%	4.40%
	PAT_ICC(3)	4.40%	4.40%
	PAT_ICC(4)	4.40%	4.40%
	PAT_ICC(5)	4.40%	4.40%
	PAT_ICC(6)	4.40%	4.40%
	THAAD_TOC(1)	1.80%	1.80%
	FAAD(1)	4.14%	4.14%
	FAAD(2)	4.14%	4.14%
	E3(1)	3.91%	22.60%
	JTAOM(1)	7.01%	25.69%
	E3I(1)	3.30%	23.09%
	E3I(2)	3.30%	23.09%
	JSTARS(1)	4.92%	4.92%
	CRC(1)	2.32%	2.32%
	AMDPCS(1)	0.50%	0.50%
	CEES(1)	0.17%	0.17%

If the Frequency Assignment authorizes TADIL-J Voice, add the below percentages to the above platforms transmitting TADIL-J Voice.

		Without Relay	With Relay
	Voice A	N/A	N/A
	Voice B	N/A	N/A

AAAUMA01A/USMC Network 2
MARINE CORPS NETWORK DESIGN FACILITY
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Allocation Table – AAAUMA01A/USMC Network 2

SB / Agg	Net Req.	Net	Set	Idx	RRN
1.1	0	0	B	31	9
2.1	1	1	C	8	10
3.1	1	1	B	12	10
4.1	1	1	A	1	13
4.2	1	1	A	3	12
4.3	1	1	B	0	11
4.4	1	1	B	3	10
5.1	1	1	C	2	13
5.2	1	1	A	7	12
5.3	1	1	C	4	11
5.4	1	1	B	7	10
6.1	1	1	B	11	10
7.1	1	1	B	5	12
8.1	1	1	C	0	11
9.1	1	1	B	4	11
10.1	1	1	B	27	10
11.1	1	1	B	19	10
12.1	1	1	B	63	9
12.2	1	1	B	119	8
13.1	0	0	C	24	10
14.1	0	0	B	28	10
15.1	0	0	A	0	14
15.2	0	0	B	8	11
16.1	0	0	C	1	14
16.2	0	0	C	12	11
17.1	0	0	B	2	13
17.2	0	0	B	1	12

AAAUMA01A/USMC Network 2
 MARINE CORPS NETWORK DESIGN FACILITY
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COMSEC Cross Reference Table – AAAUMA01A/USMC Network 2

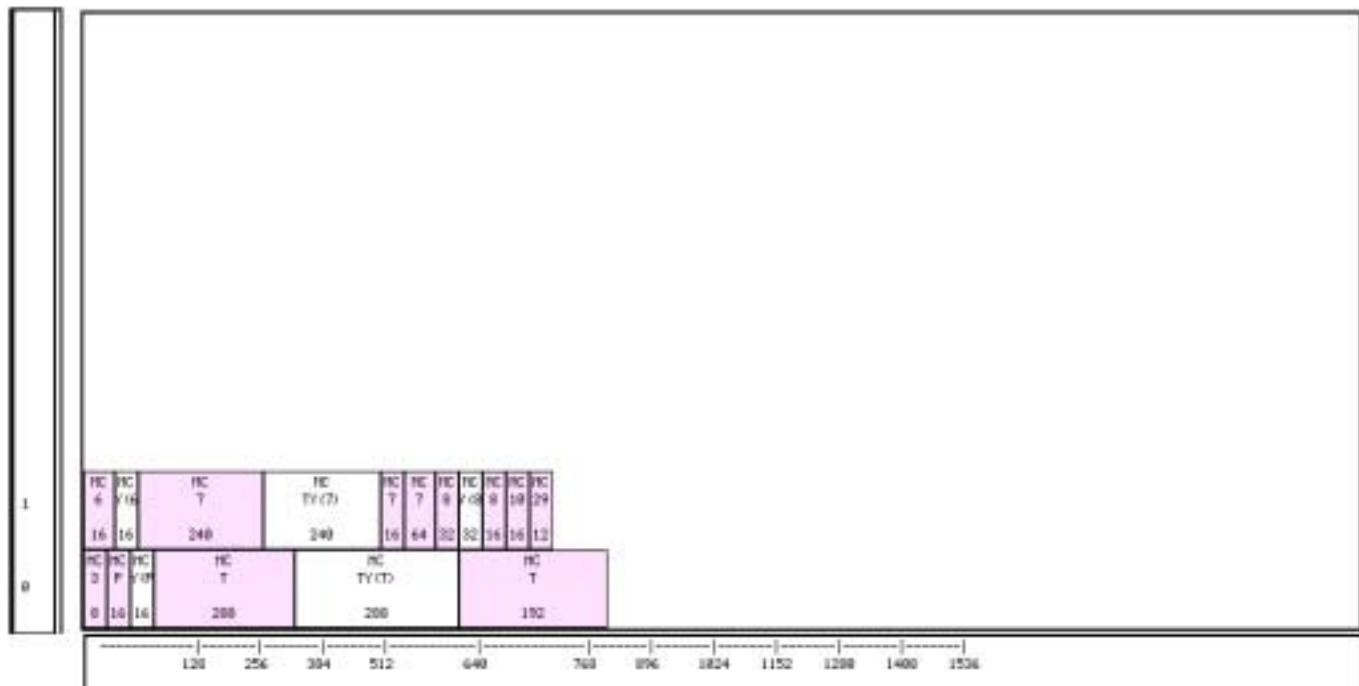
Default MSEC = 1		Default TSEC = 1			
SDU Locations					
Participant	0/1	2/3	4/5	6/7	Overflow
PAT_ICC(1)				1	
PAT_ICC(2)				1	
PAT_ICC(3)				1	
PAT_ICC(4)				1	
PAT_ICC(5)				1	
PAT_ICC(6)				1	
THAAD_TOC(1)				1	
FAAD(1)				1	
FAAD(2)				1	
E3(1)				1	
JTAOM(1)	1				
E3I(1)				1	
E3I(2)				1	
JSTARS(1)				1	
CRC(1)				1	
AMDPCS(1)				1	
CEES(1)				1	

AAAUMA01A/USMC Network 2
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Time Line – AAAUMA01A/USMC Network 2

Time Line Display Status: CREATED

Nets



Total Slots/Frame

Note: Not to scale

AAAUMA01A/USMC Network 2
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NDL File Name Table

Platforms referenced in the below table correspond with specific NDL file names or Network file identification numbers for each respective participant platform.

Network Platform Name By Service		File Name/Network Used By Host System
Marine Corps		
JTAOM	JTAOM(1)	TAOM1_2.PF

**AAAUMA01A/USMC Network 2
MARINE CORPS NETWORK DESIGN FACILITY
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APPENDIX B – AAAUMA01A/USMC Network 2

SHORT FORM REPORT FOR JTAOM (1)

AAAUMA01A/USMC Network 2
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Participant JTAOM (1)

Participant	Block Id. No.	Slot Type	Msg Cat	Total Slots Req'd	Slot Blocks Req'd	Slot Group A=Agg	Slot Group Elemt.	Set	Index	RRN	Net	Relay Delay
JTAOM(1)	1	T	3	8	8	1.1	0	B	31	9	0	0
	2	T	6	1	1	2.1	11	C	168	6	1	0
	3	T	7	32	32	7.1	2	B	13	11	1	0
	4	T	8	8	8	10.1	2	B	59	9	1	0
	5	T	10	4	4	11.1	2	B	83	8	1	0
	6	T	29	4	4	12.1	2	B	127	8	1	0
	7	T	30	1	1	13.1	11	C	184	6	0	0
	8	T	31	48	32	17.1	1	B	2	11	0	0
	9	T	31		16	17.2	1	B	1	10	0	0
	10	R	7	16	16	6.1	0	B	11	10	1	0
	11	R	7	64	64	7.1	0	B	5	12	1	0
	12	R	8	16	16	10.1	0	B	27	10	1	0
	13	R	10	16	16	11.1	0	B	19	10	1	0
	14	R	29	12	8	12.1	0	B	63	9	1	0
	15	R	29		4	12.2	0	B	119	8	1	0
	16	R	30	16	16	13.1	0	C	24	10	0	0
	17	R	30	16	16	14.1	0	B	28	10	0	0
	18	R	31	288	256	15.1	0	A	0	14	0	0
	19	R	31		32	15.2	0	B	8	11	0	0
	20	R	31	288	256	16.1	0	C	1	14	0	0
	21	R	31		32	16.2	0	C	12	11	0	0
	22	R	31	192	128	17.1	0	B	2	13	0	0
	23	R	31		64	17.2	0	B	1	12	0	0
	24	Y	6	16	16	2.1	0	C	8	10	1	11
	25	Y	7	240	128	4.1	0	A	1	13	1	17
	26	Y	7		64	4.2	0	A	3	12	1	12
	27	Y	7		32	4.3	0	B	0	11	1	13
	28	Y	7		16	4.4	0	B	3	10	1	12
	29	Y	8	32	32	8.1	0	C	0	11	1	11

AAAUMB01A/USMC Network 3
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NETWORK DESCRIPTION

Section 3
Network AAAUMB01A
USMC Network 3 – ADCP(1)

AAAUMB01A/USMC Network 3
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

3.0 Executive Summary – AAAUMB01A/USMC Network 3

Network:	AAAUMB01A USMC Network 3		Created for:	East Coast Operations					
<hr/>									
Use Limitations: IPF OVERRIDE = 100/50									
Participants:	USMC Platforms	USN Platforms	USA Platforms	USAF Platforms	Other Platforms				
USMC Network 3	1 ADCP		6 PAT_ICC 1 THAAD_TOC 2 FAAD 1 AMDPCS	1 E-3 2 E3I 1 JSTARS 1 CRC 1 CEES					
<hr/>									
Operational Summary:	1. Highest Platform TSDF = 25.69%								
<hr/>									
Network Requested by:	MACS-2 ATTN: 1stLt Smith								
<hr/>									
Send comments and Recommendations to:	USMC Network Design Facility Attn: AD-09 (MCNDF) Box 555171 Camp Pendleton, CA 92055-5171 E-mail: mcndf@mctssa.usmc.mil Website: http://www.mctssa.usmc.mil Telephone: DSN 365-2796/2133 COMM (760) 725-2796/2133								

AAAUMB01A/USMC Network 3
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NETWORK DESCRIPTION

3.1 USMC Network 3 Functional Description – ADCP(1)

USMC Network 3 was developed as a variant of Army Network AAAUMB01A by the Marine Corps Network Design Facility to support joint ground and air training operations for USMC platforms. Network 3 variant allows ADCP(1) to use E3(2) time slots as a participant in the network. The network participants are: PAT_ICC(1)/6, THAAD_TOC(1), FAAD(1)/2, E3(1), ADCP(1), E3I(1)/2, JSTARS(1), CRC(1), AMDPCS(1) and CEES(1).

NOTES:

1. The network's **IPF Override** is set to **3**, the **TSDF** is set to **100/50**, the **Communications Mode** is set to **Mode 1**, the **TDMA Range** is **300 nmi**, the **TSEC** is set to **1**, and the **MSEC** is set to **1**.
2. **JTIDS Voice communications** are not available in this network.
3. **JICO oversees all responsibility in managing network TSDF, NTR, and Relay assignments.**
4. **E3(1) is the only relay platform assigned in the network.**
5. **ADCP(1) cannot be in the network if E3(2) is a participant.**
6. **ADCP(1) Surveillance transmissions are not relayed.**

3.2 Operational Summary

1. 100/50.

All participants do not have line of sight with every other participant. Only E3(1) will perform relay functions as designated by JICO.

3.3 Use Limitations

1. 100/50 IPF

3.4 Participants

<u>USMC Platforms</u>	<u>USN Platforms</u>	<u>USA Platforms</u>	<u>USAF Platforms</u>	<u>Other Platforms</u>
1 ADCP		6 PAT_ICC 1 THAAD_TOC 2 FAAD 1 AMDPCS	1 E3 2 E3I 1 JSTARS 1 CRC 1 CEES	

AAAUMB01A/USMC Network 3
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

3.5 Network Participation Groups

NPG #3 (RTT-B)

Participants:	All units, except E3I(1)/2 IJMS
Access:	Contention access 4
Capacity:	8 total slots
Assigned Net:	0

NPG #6 (PPLI-B)

Participants:	All units, except E3I(1)/2 IJMS
Access:	Dedicated
Capacity:	16 total slots
Assigned Net:	1
Relay:	E3(1)
Packing Limit:	P2SP

NPG #7 (Surveillance)

Participants:	PAT_ICC(1)/6: transmit/receive THAAD_TOC: transmit/receive FAAD(1)/2: transmit/receive E3(1): transmit/receive. Own surveillance is not relayed. Relays all other platform's surveillance except for ADCP(1)'s surveillance. ADCP(1): transmit/receive. Own surveillance is not relayed. JSTARS: transmit only. Own surveillance is not relayed. CRC: transmit/receive AMDPCS: receive only CEES: receive only
Access:	Dedicated
Capacity:	320 total slots
Assigned Net:	1
Relay:	E3(1)
Packing Limit:	P2SP

AAAUMB01A/USMC Network 3
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG #8 (Weapons Coordination and Mission Management)

Participants: PAT_ICC(1)/6: transmit/receive
E3(1): transmit/receive. Own transmit is not relayed.
Relays all others except ADCP(1).
ADCP(1): transmit/receive. Own transmit is not relayed.
JSTAR/CEES: receive only
CRC(1)/AMDPCS(1): transmit/receive.

Access: Dedicated
Capacity: 48 total slots
Assigned Net: 1
Relay: E3(1)
Packing Limit: P2SP

NPG #10 (Electronic Warfare)

Participants: E3(1), ADCP(1), JSTARS(1), CRC(1): transmit/receive
CEES: receive only

Access: Dedicated
Capacity: 16 total slots
Assigned Net: 1
Relay: None.
Packing Limit: P2SP

NPG #29 (Residual Messages)

Participants: E3(1), ADCP(1), JSTARS(1): transmit/receive
Access: Dedicated
Capacity: 12 total slots
Assigned Net: 1
Relay: None.
Packing Limit: P2SP

NPG #30 (P-Messages)

Participants: All units transmit/receive, except for CEES(1) is receive only.

Access: STD
Capacity: 16 total slots
Assigned Net: 0
Relay: E3I(1)/2
Packing Limit: Standard

AAAUMB01A/USMC Network 3
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG #31 (T-Messages)

Participants:	PAT_ICC(1)/6 and FAAD(1)/2: transmit/receive ADCP(1), E3I(1)/2, and JSTARS: transmit/receive, but not relayed. E3(1), CRC(1), AMDPCS(1) and CEES(1) are receive only.
Access:	STD
Capacity:	480 total slots
Assigned Net:	0
Relay:	E3I(1)/2
Packing Limit:	P2SP

AAAUMB01A/USMC Network 3
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX A – AAAUMB01A/USMC Network 3

CONNECTIVITY MATRIX
PULSE DENSITY REPORT
ALLOCATION TABLE
COMSEC CROSS REFERENCE TABLE
TIME LINE DISPLAY
NDL FILENAME TABLE

AAAUMB01A/USMC Network 3
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

Connectivity Matrix – AAAUMB01A/USMC Network 3

Slot Group			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
NPG Number			3	6	TY	7	TY	7	7	8	TY	8	10	29	P	TY	T	TY	T
Net Number			0	1	1	1	1	1	1	1	1	1	1	0		0		0	
TSEC Variable			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
MSEC Variable																			
Access Mode			4	D		D		D	D	D		D	D	D	D		D	D	
Packing Limit				P2SP		P2SP		P2SP	P2SP		P2SP	P2SP	P2SP	STD		STD		STD	
Per Unit Slots/Frame				1		24			32	4		8	4	4	1		36		48
Total Slots/Frame			8	16	16	240	240	16	64	32	32	16	16	12	16	16	288	288	192
Participant ID	Net Entry Transmit Enabled	Default Net	Connectivity																
			1.PAT_ICC(1)	Y	1	T	T/R	R	T/R	R	R	T/R	R	R		T/R	R	T/R	R
			2.PAT_ICC(2)	Y	1	T	T/R	R	T/R	R	R	T/R	R	R		T/R	R	T/R	R
			3.PAT_ICC(3)	Y	1	T	T/R	R	T/R	R	R	T/R	R	R		T/R	R	T/R	R
			4.PAT_ICC(4)	Y	1	T	T/R	R	T/R	R	R	T/R	R	R		T/R	R	T/R	R
			5.PAT_ICC(5)	Y	1	T	T/R	R	T/R	R	R	T/R	R	R		T/R	R	T/R	R
			6.PAT_ICC(6)	Y	1	T	T/R	R	T/R	R	R	T/R	R	R		T/R	R	T/R	R
			7.THAAD_TOC(1)	Y	10	T	T/R	R	T/R	R	R					T/R	R		
			8.FAAD(1)	Y	1	T	T/R	R	T/R	R	R					T/R	R	T/R	R
			9.FAAD(2)	Y	1	T	T/R	R	T/R	R	R					T/R	R	T/R	R
			10.E3(1)	Y	1	T	T/R	Y	R	Y	R	T/R	R	Y	T/R	T/R	T/R	R	R
			11.ADCP(1)	Y	1	T	T/R	R	R	R	R	T/R	R	R	T/R	T/R	T/R	R	T/R
			12.E3I(1)	Y												T/R	Y	R	Y
			13.E3I(2)	Y												T/R	Y	R	Y
			14.JSTARS(1)	Y	1	T	T/R	R	R	R	T	R	R	R	T/R	T/R	T/R	R	T/R
			15.CRC(1)	Y	1	T	T/R	R	T/R	R	R	T/R	R	R	T/R		T/R	R	R
			16.AMDPCS(1)	Y	1	T	T/R	R	R	R	R	T/R	R	R		T/R	R	R	R
			17.CEES(1)	Y	1	T	R	R	R	R	R	R	R	R	R	R	R	R	R

AAAUMB01A/USMC Network 3
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

Pulse Density Report – AAAUMB01A/USMC Network 3

Check for active platform	Participant	Data Without Relay	Data With Relay
	PAT_ICC(1)	4.40%	4.40%
	PAT_ICC(2)	4.40%	4.40%
	PAT_ICC(3)	4.40%	4.40%
	PAT_ICC(4)	4.40%	4.40%
	PAT_ICC(5)	4.40%	4.40%
	PAT_ICC(6)	4.40%	4.40%
	THAAD_TOC(1)	1.80%	1.80%
	FAAD(1)	4.14%	4.14%
	FAAD(2)	4.14%	4.14%
	E3(1)	3.91%	22.60%
	ADCP(1)	7.01%	7.01%
	E3I(1)	3.30%	23.09%
	E3I(2)	3.30%	23.09%
	JSTARS(1)	4.92%	4.92%
	CRC(1)	2.32%	2.32%
	AMDPCS(1)	0.50%	0.50%
	CEES(1)	0.17%	0.17%

If the Frequency Assignment authorizes TADIL-J Voice, add the below percentages to the above platforms transmitting TADIL-J Voice.

		Without Relay	With Relay
	Voice A	N/A	N/A
	Voice B	N/A	N/A

AAAUMB01A/USMC Network 3
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

Allocation Table – AAAUMB01A/USMC Network 3

SB / Agg	Net Req.	Net	Set	Idx	RRN
1.1	0	0	B	31	9
2.1	1	1	C	8	10
3.1	1	1	B	12	10
4.1	1	1	A	1	13
4.2	1	1	A	3	12
4.3	1	1	B	0	11
4.4	1	1	B	3	10
5.1	1	1	C	2	13
5.2	1	1	A	7	12
5.3	1	1	C	4	11
5.4	1	1	B	7	10
6.1	1	1	B	11	10
7.1	1	1	B	5	12
8.1	1	1	C	0	11
9.1	1	1	B	4	11
10.1	1	1	B	27	10
11.1	1	1	B	19	10
12.1	1	1	B	63	9
12.2	1	1	B	119	8
13.1	0	0	C	24	10
14.1	0	0	B	28	10
15.1	0	0	A	0	14
15.2	0	0	B	8	11
16.1	0	0	C	1	14
16.2	0	0	C	12	11
17.1	0	0	B	2	13
17.2	0	0	B	1	12

AAAUMB01A/USMC Network 3
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

COMSEC Cross Reference Table – AAAUMB01A/USMC Network 3

Default MSEC = 1		Default TSEC = 1			
SDU Locations					
Participant	0/1	2/3	4/5	6/7	Overflow
PAT_ICC(1)				1	
PAT_ICC(2)				1	
PAT_ICC(3)				1	
PAT_ICC(4)				1	
PAT_ICC(5)				1	
PAT_ICC(6)				1	
THAAD_TOC(1)				1	
FAAD(1)				1	
FAAD(2)				1	
E3(1)				1	
ADCP(1)	1				
E3I(1)				1	
E3I(2)				1	
JSTARS(1)				1	
CRC(1)				1	
AMDPCS(1)				1	
CEES(1)				1	

AAAUMB01A/USMC Network 3
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Time Line – AAAUMB01A/USMC Network 3

Time Line Display Status: CREATED

Nets



Total Slots/Frame

Note: Not to scale

AAAUMB01A/USMC Network 3
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NDL File Name Table

Platforms referenced in the below table correspond with specific NDL file names or Network file identification numbers for each respective participant platform.

Network Platform Name By Service		File Name/Network Used By Host System
Marine Corps		
ADCP	ACDP(1)	ADCP1_3.PF

AAAUMB01A/USMC Network 3
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX B – AAAUMB01A/USMC Network 3

SHORT FORM REPORT FOR ADCP (1)

AAAUMB01A/USMC Network 3
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

Participant ADCP(1)

Participant	Block Id. No.	Slot Type	Msg Cat	Total Slots Req'd	Slot Blocks Req'd	Slot Group A=Agg	Slot Group Elem.	Set	Index	RRN	Net	Relay Delay
ADCP(1)	1	T	3	8	8	1.1	0	B	31	9	0	0
	2	T	6	1	1	2.1	11	C	168	6	1	0
	3	T	7	32	32	7.1	2	B	13	11	1	0
	4	T	8	8	8	10.1	2	B	59	9	1	0
	5	T	10	4	4	11.1	2	B	83	8	1	0
	6	T	29	4	4	12.1	2	B	127	8	1	0
	7	T	30	1	1	13.1	11	C	184	6	0	0
	8	T	31	48	32	17.1	1	B	2	11	0	0
	9	T	31		16	17.2	1	B	1	10	0	0
	10	R	6	16	16	2.1	0	C	8	10	1	0
	11	R	6	16	16	3.1	0	B	12	10	1	0
	12	R	7	240	128	4.1	0	A	1	13	1	0
	13	R	7		64	4.2	0	A	3	12	1	0
	14	R	7		32	4.3	0	B	0	11	1	0
	15	R	7		16	4.4	0	B	3	10	1	0
	16	R	7	240	128	5.1	0	C	2	13	1	0
	17	R	7		64	5.2	0	A	7	12	1	0
	18	R	7		32	5.3	0	C	4	11	1	0
	19	R	7		16	5.4	0	B	7	10	1	0
	20	R	7	16	16	6.1	0	B	11	10	1	0
	21	R	7	64	64	7.1	0	B	5	12	1	0
	22	R	8	32	32	8.1	0	C	0	11	1	11
	23	R	8	16	16	10.1	0	B	27	10	1	0
	24	R	10	16	16	11.1	0	B	19	10	1	0
	25	R	29	12	8	12.1	0	B	63	9	1	0
	26	R	29		4	12.2	0	B	119	8	1	0
	27	R	30	16	16	13.1	0	C	24	10	0	0
	28	R	30	16	16	14.1	0	B	28	10	0	0
	29	R	31	288	256	15.1	0	A	0	14	0	0
	30	R	31		32	15.2	0	B	8	11	0	0
	31	R	31	288	256	16.1	0	C	1	14	0	0
	32	R	31		32	16.2	0	C	12	11	0	0
	33	R	31	192	128	17.1	0	B	2	13	0	0
	34	R	31		64	17.2	0	B	1	12	0	0

AAAUMC01A/USMC Network 4
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Section 4
Network AAAUMC01A
USMC Network 4 – JTAOM(1)

AAAUMC01A/USMC Network 4
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

4.0 Executive Summary – AAAUMC01A/USMC Network 4

Network:	AAAUMC01A USMC Network 4		Created for:	East Coast Operations	
Use Limitations:	IPF OVERRIDE = 100/50				
Participants:	USMC Platforms	USN Platforms	USA Platforms	USAF Platforms	Other Platforms
	1 JTAOM		6 PAT_ICC 1 THAAD_TOC 2 FAAD 1 AMDPCS	2 E-3 2 E3I 1 JSTARS 1 CEES	
Operational Summary:	1. Highest Platform TSDF = 25.69%				
Network Requested by:	MACS-2 ATTN: 1stLt Smith				
Send comments and Recommendations to:	USMC Network Design Facility Attn: AD-09 (MCNDF) Box 555171 Camp Pendleton, CA 92055-5171 E-mail: mcndf@mctssa.usmc.mil Website: http://www.mctssa.usmc.mil Telephone: DSN 365-2796/2133 COMM (760) 725-2796/2133				

AAAUMC01A/USMC Network 4
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

4.1 USMC Network 4 Functional Description – JTAOM(1)

USMC Network 4 was developed as a variant of Army Network AAAUMC01A by the Marine Corps Network Design Facility to support joint ground and air training operations for USMC platforms. Network 4 variant allows JTAOM(1) to use CRC(1) time slots as a participant in the network. The network participants are: PAT_ICC(1)/6, THAAD_TOC(1), FAAD(1)/2, E3(1), E3(2), E3I(1)/2, JSTARS(1), JTAOM(1), AMDPCS(1) and CEES(1).

NOTES:

1. The network's **IPF Override** is set to **3**, the **TSDF** is set to **100/50**, the **Communications Mode** is set to **Mode 1**, the **TDMA Range** is **300 nmi**, the **TSEC** is set to **1**, and the **MSEC** is set to **1**.
2. **JTIDS Voice communications** are not available in this network.
3. **JICO oversees all responsibility in managing network TSDF, NTR, and Relay assignments.**
4. **E3(1) and E3(2) are the only relay platforms assigned in the network.**
5. **JTAOM(1) cannot be in the network if CRC(1) is a participant.**
6. **E3(1) and (2) Surveillance transmissions are not relayed.**

4.2 Operational Summary

1. 100/50.

All participants do not have line of sight with every other participant. Only one E3 at a time will perform relay functions as designated by JICO.

4.3 Use Limitations

1. 100/50 IPF

4.4 Participants

<u>USMC Platforms</u>	<u>USN Platforms</u>	<u>USA Platforms</u>	<u>USAF Platforms</u>	<u>Other Platforms</u>
1 JTAOM		6 PAT_ICC 1 THAAD_TOC 2 FAAD 1 AMDPCS	2 E3 2 E3I 1 JSTARS 1 CEES	

AAAUMC01A/USMC Network 4
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

4.5 Network Participation Groups

NPG #3 (RTT-B)

Participants: All units, except E3I(1)/2 IJMS
Access: Contention access 4
Capacity: 8 total slots
Assigned Net: 0

NPG #6 (PPLI-B)

Participants: All units, except E3I(1)/2 IJMS
Access: Dedicated
Capacity: 16 total slots
Assigned Net: 1
Relay: E3(1) and E3(2)
Packing Limit: P2SP

NPG #7 (Surveillance)

Participants: PAT_ICC(1)/6: transmit/receive
THAAD_TOC: transmit/receive
FAAD(1)/2: transmit/receive
E3(1): transmit/receive. Own surveillance is not relayed.
Relays all other platform's surveillance except for E3(2)'s surveillance.
E3(2): transmit/receive. Own surveillance is not relayed.
Relays all other platform's surveillance except for E3(1)'s surveillance.
JSTARS: transmit only. Own surveillance is not relayed.
JTAOM(1): transmit/receive
AMDPCS: receive only
CEES: receive only
Access: Dedicated
Capacity: 320 total slots
Assigned Net: 1
Relay: E3(1) and E3(2)
Packing Limit: P2SP

AAAUMC01A/USMC Network 4
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG #8 (Weapons Coordination and Mission Management)

Participants: PAT_ICC(1)/6: transmit/receive
E3(1): transmit/receive. Own transmit is not relayed.
Relays all others except E3(2).
E3(2): transmit/receive. Own transmit is not relayed.
Relays all others except E3(1).
JSTAR/CEES: receive only
JTAOM(1) and AMDPCS(1): transmit/receive.

Access: Dedicated
Capacity: 48 total slots
Assigned Net: 1
Relay: E3(1) and E3(2).
Packing Limit: P2SP

NPG #10 (Electronic Warfare)

Participants: E3(1), E3(2), JSTARS(1), JTAOM(1): transmit/receive
CEES: receive only

Access: Dedicated
Capacity: 16 total slots
Assigned Net: 1
Relay: None.
Packing Limit: P2SP

NPG #29 (Residual Messages)

Participants: E3(1), E3(2), JSTARS(1): transmit/receive
Access: Dedicated
Capacity: 12 total slots
Assigned Net: 1
Relay: None.
Packing Limit: P2SP

NPG #30 (P-Messages)

Participants: All units transmit/receive, except for CEES(1) is receive only.
Access: STD
Capacity: 16 total slots
Assigned Net: 0
Relay: E3I(1)/2
Packing Limit: Standard

AAAUMC01A/USMC Network 4
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG #31 (T-Messages)

Participants:	PAT_ICC(1)/6 and FAAD(1)/2: transmit/receive E3(2), E3I(1)/2, and JSTARS: transmit/receive, but not relayed. E3(1), AMDPCS(1) and CEES(1) are receive only.
Access:	STD
Capacity:	480 total slots
Assigned Net:	0
Relay:	E3I(1)/2
Packing Limit:	P2SP

AAAUMC01A/USMC Network 4
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX A -- AAAUMC01A/USMC Network 4

CONNECTIVITY MATRIX
PULSE DENSITY REPORT
ALLOCATION TABLE
COMSEC CROSS REFERENCE TABLE
TIME LINE DISPLAY
NDL FILENAME TABLE

AAAUMC01A/USMC Network 4
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

Connectivity Matrix – AAAUMC01A/USMC Network 4

Slot Group			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
NPG Number			3	6	TY	7	TY	7	7	8	TY	8	10	29	P	TY	T	TY	T	
Net Number			0	1	1	1	1	1	1	1	1	1	1	0		0		0		
TSEC Variable			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
MSEC Variable																				
Access Mode			4	D		D		D	D	D		D	D	D		D		D		
Packing Limit				P2SP		P2SP		P2SP	P2SP	P2SP		P2SP	P2SP	P2SP	STD		STD		STD	
Per Unit Slots/Frame				1		24			32	4		8	4	4	1		36		48	
Total Slots/Frame			8	16	16	240	240	16	64	32	32	16	16	12	16	16	288	288	192	
Participant ID	Net Entry Transmit Enabled	Default Net	Connectivity																	
1.PAT_ICC(1)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
2.PAT_ICC(2)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
3.PAT_ICC(3)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
4.PAT_ICC(4)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
5.PAT_ICC(5)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
6.PAT_ICC(6)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
7.THAAD_TOC(1)	Y	10	T	T/R	R	T/R	R	R							T/R	R				
8.FAAD(1)	Y	1	T	T/R	R	T/R	R	R							T/R	R	T/R	R	R	
9.FAAD(2)	Y	1	T	T/R	R	T/R	R	R	R						T/R	R	T/R	R	R	
10.E3(1)	Y	1	T	T/R	Y	R	Y	R	T/R	R	Y	T/R	T/R	T/R	T/R	R	R	R	R	
11.E3(2)	Y	1	T	T/R	Y	R	Y	R	T/R	R	Y	T/R	T/R	T/R	T/R	R	R	R	T/R	
12.E3I(1)	Y															T/R	Y	R	Y	T/R
13.E3I(2)	Y															T/R	Y	R	Y	T/R
14.JSTARS(1)	Y	1	T	T/R	R	R	R	T	R	R	R	R	R	T/R	T/R	T/R	R	R	T/R	
15.JTAOM(1)	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R	T/R		T/R	R	R	R	R	
16.AMDPCS(1)	Y	1	T	T/R	R	R	R	R	R	T/R	R	R			T/R	R	R	R	R	
17.CEES(1)	Y	1	T	R	R	R	R	R	R	R	R	R	R		R	R	R	R	R	

AAAUMC01A/USMC Network 4
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

Pulse Density Report – AAAUMC01A/USMC Network 4

Check for active platform	Participant	Data Without Relay	Data With Relay
	PAT_ICC(1)	4.40%	4.40%
	PAT_ICC(2)	4.40%	4.40%
	PAT_ICC(3)	4.40%	4.40%
	PAT_ICC(4)	4.40%	4.40%
	PAT_ICC(5)	4.40%	4.40%
	PAT_ICC(6)	4.40%	4.40%
	THAAD_TOC(1)	1.80%	1.80%
	FAAD(1)	4.14%	4.14%
	FAAD(2)	4.14%	4.14%
	E3(1)	3.91%	22.60%
	E3(2)	7.01%	25.69%
	E3I(1)	3.30%	23.09%
	E3I(2)	3.30%	23.09%
	JSTARS(1)	4.92%	4.92%
	JTAOM(1)	2.32%	2.32%
	AMDPCS(1)	0.50%	0.50%
	CEES(1)	0.17%	0.17%

If the Frequency Assignment authorizes TADIL-J Voice, add the below percentages to the above platforms transmitting TADIL-J Voice.

		Without Relay	With Relay
	Voice A	N/A	N/A
	Voice B	N/A	N/A

AAAUMC01A/USMC Network 4
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

Allocation Table – AAAUMC01A/USMC Network 4

SB / Agg	Net Req.	Net	Set	Idx	RRN
1.1	0	0	B	31	9
2.1	1	1	C	8	10
3.1	1	1	B	12	10
4.1	1	1	A	1	13
4.2	1	1	A	3	12
4.3	1	1	B	0	11
4.4	1	1	B	3	10
5.1	1	1	C	2	13
5.2	1	1	A	7	12
5.3	1	1	C	4	11
5.4	1	1	B	7	10
6.1	1	1	B	11	10
7.1	1	1	B	5	12
8.1	1	1	C	0	11
9.1	1	1	B	4	11
10.1	1	1	B	27	10
11.1	1	1	B	19	10
12.1	1	1	B	63	9
12.2	1	1	B	119	8
13.1	0	0	C	24	10
14.1	0	0	B	28	10
15.1	0	0	A	0	14
15.2	0	0	B	8	11
16.1	0	0	C	1	14
16.2	0	0	C	12	11
17.1	0	0	B	2	13
17.2	0	0	B	1	12

AAAUMC01A/USMC Network 4
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

COMSEC Cross Reference Table – AAAUMC01A/USMC Network 4

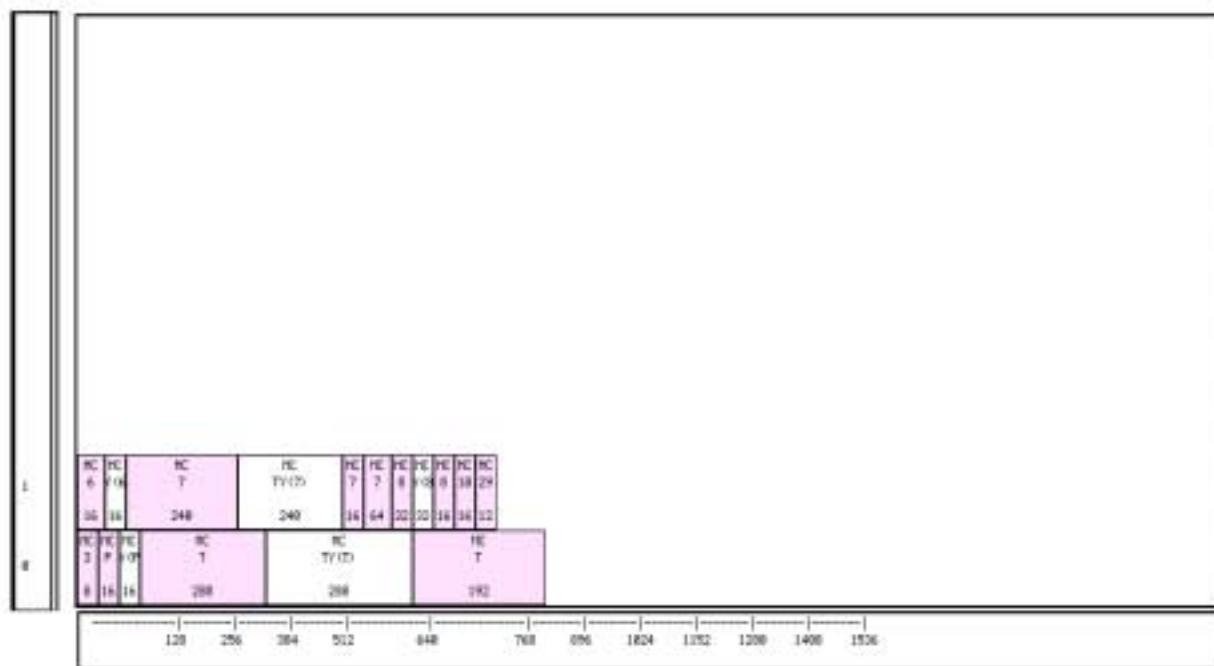
Default MSEC = 1		Default TSEC = 1			
SDU Locations					
Participant	0/1	2/3	4/5	6/7	Overflow
PAT_ICC(1)				1	
PAT_ICC(2)				1	
PAT_ICC(3)				1	
PAT_ICC(4)				1	
PAT_ICC(5)				1	
PAT_ICC(6)				1	
THAAD_TOC(1)				1	
FAAD(1)				1	
FAAD(2)				1	
E3(1)				1	
E3(2)				1	
E3I(1)				1	
E3I(2)				1	
JSTARS(1)				1	
JTAOM(1)	1			1	
AMDPCS(1)				1	
CEES(1)				1	

AAAUMC01A/USMC Network 4
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Time Line - AAAUMC01A/USMC Network 4

Time Line Display Status: CREATED

Nets



Total Slots/Frame

Note: Not to scale

AAAUMC01A/USMC Network 4
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NDL File Name Table

Platforms referenced in the below table correspond with specific NDL file names or Network file identification numbers for each respective participant platform.

Network Platform Name By Service		File Name/Network Used By Host System
Marine Corps		
JTAOM	JTAOM(1)	TAOM1_4.PF

AAAUMC01A/USMC Network 4
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX B -- AAAUMC01A/USMC Network 4

SHORT FORM REPORT FOR JTAOM (1)

AAAUMC01A/USMC Network 4
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Participant JTAOM (1)

Participant	Block Id. No.	Slot Type	Msg Cat	Total Slots Req'd	Slot Blocks Req'd	Slot Group A=Agg	Slot Group Elemt.	Set	Index	RRN	Net	Relay Delay
JTAOM(1)	1	T	3	8	8	1.1	0	B	31	9	0	0
	2	T	6	1	1	2.1	13	C	104	6	1	0
	3	T	7	24	16	4.2	10	A	19	10	1	0
	4	T	7		8	4.4	10	B	35	9	1	0
	5	T	8	4	4	8.1	7	C	48	8	1	0
	6	T	10	4	4	11.1	4	B	115	8	1	0
	7	T	30	1	1	13.1	15	C	248	6	0	0
	8	R	6	16	16	2.1	0	C	8	10	1	0
	9	R	6	16	16	3.1	0	B	12	10	1	0
	10	R	7	240	128	4.1	0	A	1	13	1	0
	11	R	7		64	4.2	0	A	3	12	1	0
	12	R	7		32	4.3	0	B	0	11	1	0
	13	R	7		16	4.4	0	B	3	10	1	0
	14	R	7	240	128	5.1	0	C	2	13	1	0
	15	R	7		64	5.2	0	A	7	12	1	0
	16	R	7		32	5.3	0	C	4	11	1	0
	17	R	7		16	5.4	0	B	7	10	1	0
	18	R	7	16	16	6.1	0	B	11	10	1	0
	19	R	7	64	64	7.1	0	B	5	12	1	0
	20	R	8	32	32	8.1	0	C	0	11	1	11
	21	R	8	16	16	10.1	0	B	27	10	1	0
	22	R	10	16	16	11.1	0	B	19	10	1	0
	23	R	30	16	16	13.1	0	C	24	10	0	0
	24	R	30	16	16	14.1	0	B	28	10	0	0
	25	R	31	288	256	15.1	0	A	0	14	0	0
	26	R	31		32	15.2	0	B	8	11	0	0
	27	R	31	288	256	16.1	0	C	1	14	0	0
	28	R	31		32	16.2	0	C	12	11	0	0
	29	R	31	192	128	17.1	0	B	2	13	0	0
	30	R	31		64	17.2	0	B	1	12	0	0

AAAUMD01A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

**Section 5
Network AAAUMD01A
USMC Network 5 – ADCP(1)**

AAAUMD01A/USMC Network 5
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

5.0 Executive Summary – AAAUMD01A/USMC Network 5					
Network:	AAAUMD01A USMC Network 5		Created for:	East Coast Operations	
Use Limitations:	IPF OVERRIDE = 100/50				
Participants:	USMC Platforms	USN Platforms	USA Platforms	USAF Platforms	Other Platforms
USMC Network 5	1 ADCP		6 PAT_ICC 1 THAAD_TOC 2 FAAD 1 AMDPCS	1 E-3 2 E3I 1 JSTARS 1 CEES	
Operational Summary:	1. Highest Platform TSDF = 25.69%				
Network Requested by:	MACS-2 ATTN: 1stLt Smith				
Send comments and Recommendations to:	USMC Network Design Facility Attn: AD-09 (MCNDF) Box 555171 Camp Pendleton, CA 92055-5171 E-mail: mcndf@mctssa.usmc.mil Website: http://www.mctssa.usmc.mil Telephone: DSN 365-2796/2133 COMM (760) 725-2796/2133				

AAAUMD01A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

5.1 USMC Network 5 Functional Description – ADCP(1)

USMC Network 5 was developed as a variant of Army Network AAAUMD01A by the Marine Corps Network Design Facility to support joint ground and air training operations for USMC platforms. Network 5 variant allows ADCP(1) to use CRC(1) time slots as a participant in the network. The network participants are: PAT_ICC(1)/6, THAAD_TOC(1), FAAD(1)/2, E3(1), E3(2), E3I(1)/2, JSTARS(1), ADCP(1), AMDPCS(1) and CEES(1).

NOTES

1. The network's **IPF Override** is set to **3**, the **TSDF** is set to **100/50**, the **Communications Mode** is set to **Mode 1**, the **TDMA Range** is **300 nmi**, the **TSEC** is set to **1**, and the **MSEC** is set to **1**.
2. **JTIDS Voice communications** are not available in this network.
3. **JICO oversees all responsibility in managing network TSDF, NTR, and Relay assignments.**
4. **E3(1) and E3(2) are the only relay platforms assigned in the network.**
5. **ADCP(1) cannot be in the network if CRC(1) is a participant.**

5.2 Operational Summary

1. 100/50.

All participants do not have line of sight with every other participant. Only One E3 will perform relay functions at time as designated by JICO.

5.3 Use Limitations

1. 100/50 IPF

5.4 Participants

<u>USMC Platforms</u>	<u>USN Platforms</u>	<u>USA Platforms</u>	<u>USAF Platforms</u>	<u>Other Platforms</u>
1 ADCP		6 PAT_ICC 1 THAAD_TOC 2 FAAD 1 AMDPCS	2 E3 2 E3I 1 JSTARS 1 CEES	

AAAUMD01A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

5.5 Network Participation Groups

NPG #3 (RTT-B)

Participants:	All units, except E3I(1)/2 IJMS
Access:	Contention access 4
Capacity:	8 total slots
Assigned Net:	0

NPG #6 (PPLI-B)

Participants:	All units, except E3I(1)/2 IJMS
Access:	Dedicated
Capacity:	16 total slots
Assigned Net:	1
Relay:	E3(1)/2
Packing Limit:	P2SP

NPG #7 (Surveillance)

Participants:	PAT_ICC(1)/6: transmit/receive THAAD_TOC: transmit/receive FAAD(1)/2: transmit/receive E3(1): transmit/receive. Own surveillance is not relayed. Relays all other platform's surveillance except for E3(2)'s surveillance. E3(2): transmit/receive. Own surveillance is not relayed. JSTARS: transmit only. Own surveillance is not relayed. ADCP(1): transmit/receive AMDPCS: receive only CEES: receive only
Access:	Dedicated
Capacity:	320 total slots
Assigned Net:	1
Relay:	E3(1)/2
Packing Limit:	P2SP

AAAUMD01A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG #8 (Weapons Coordination and Mission Management)

Participants: PAT_ICC(1)/6: transmit/receive
E3(1): transmit/receive. Own transmit is not relayed.
Relays all others except E3(2).
E3(2): transmit/receive. Own transmit is not relayed.
Relays all others except E3(1)
JSTAR/CEES: receive only
ADCP(1)/AMDPCS(1): transmit/receive.

Access: Dedicated
Capacity: 48 total slots
Assigned Net: 1
Relay: E3(1)/2
Packing Limit: P2SP

NPG #10 (Electronic Warfare)

Participants: E3(1), E3(2), JSTARS(1), ADCP(1): transmit/receive
CEES: receive only

Access: Dedicated
Capacity: 16 total slots
Assigned Net: 1
Relay: None.
Packing Limit: P2SP

NPG #29 (Residual Messages)

Participants: E3(1), ADCP(1), JSTARS(1): transmit/receive
Access: Dedicated
Capacity: 12 total slots
Assigned Net: 1
Relay: None.
Packing Limit: P2SP

NPG #30 (P-Messages)

Participants: All units transmit/receive, except for CEES(1) is receive only.
Access: STD
Capacity: 16 total slots
Assigned Net: 0
Relay: E3I(1)/2
Packing Limit: Standard

AAAUMD01A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NPG #31 (T-Messages)

Participants:	PAT_ICC(1)/6 and FAAD(1)/2: transmit/receive E3(2), E3I(1)/2 and JSTARS: transmit/receive, but not relayed. E3(1), ADCP(1), AMDPCS(1) and CEES(1) are receive only.
Access:	STD
Capacity:	480 total slots
Assigned Net:	0
Relay:	E3I(1)/2
Packing Limit:	P2SP

AAAUMD01A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX A – AAAUMD01A/USMC Network 5

CONNECTIVITY MATRIX
PULSE DENSITY REPORT
ALLOCATION TABLE
COMSEC CROSS REFERENCE TABLE
TIME LINE DISPLAY
NDL FILENAME TABLE

AAAUMD01A/USMC Network 5
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

Connectivity Matrix – AAAUMD01A/USMC Network 5

Slot Group			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
NPG Number			3	6	TY	7	TY	7	7	8	TY	8	10	29	P	TY	T	TY	T	
Net Number			0	1	1	1	1	1	1	1	1	1	1	0		0		0		
TSEC Variable			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
MSEC Variable																				
Access Mode			4	D		D		D	D	D		D	D	D		D		D		
Packing Limit				P2S P		P2S P		P2S P	P2S P	P2S P		P2S P	P2S P	STD		ST D		STD		
Per Unit Slots/Frame					1		24			32	4		8	4	4	1		36		48
Total Slots/Frame			8	16	16	240	240	16	64	32	32	16	16	12	16	16	288	288	192	
Participant ID	Net Entry Transmit Enabled	Default Net	Connectivity																	
	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R			T/R	R	T/R	R	R	
	Y	10	T	T/R	R	T/R	R	R	R						T/R	R				
	Y	1	T	T/R	R	T/R	R	R	R						T/R	R	T/R	R	R	
	Y	1	T	T/R	R	T/R	R	R	R						T/R	R	T/R	R	R	
	Y	1	T	T/R	R	T/R	R	R	R						T/R	R	T/R	R	R	
	Y	1	T	T/R	Y	R	Y	R	T/R	R	Y	T/R	T/R	T/R	T/R	R	R	R	R	
	Y	1	T	T/R	Y	R	Y	R	T/R	R	Y	T/R	T/R	T/R	T/R	R	R	R	T/R	
	Y														T/R	Y	R	Y	T/R	
	Y														T/R	Y	R	Y	T/R	
	Y	1	T	T/R	R	R	R	T	R	R	R	R	T/R	T/R	T/R	R	R	R	T/R	
	Y	1	T	T/R	R	T/R	R	R	R	T/R	R	R	T/R		T/R	R	R	R	R	
	Y	1	T	T/R	R	R	R	R	R	T/R	R	R			T/R	R	R	R	R	
	Y	1	T	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	

AAAUMD01A/USMC Network 5
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

Pulse Density Report - AAAUMD01A/USMC Network 5

Check for active platform	Participant	Data Without Relay	Data With Relay
	PAT_ICC(1)	4.40%	4.40%
	PAT_ICC(2)	4.40%	4.40%
	PAT_ICC(3)	4.40%	4.40%
	PAT_ICC(4)	4.40%	4.40%
	PAT_ICC(5)	4.40%	4.40%
	PAT_ICC(6)	4.40%	4.40%
	THAAD_TOC(1)	1.80%	1.80%
	FAAD(1)	4.14%	4.14%
	FAAD(2)	4.14%	4.14%
	E3(1)	3.91%	22.60%
	E3(2)	7.01%	25.69%
	E3I(1)	3.30%	23.09%
	E3I(2)	3.30%	23.09%
	JSTARS(1)	4.92%	4.92%
	ADCP(1)	2.32%	2.32%
	AMDPCS(1)	0.50%	0.50%
	CEES(1)	0.17%	0.17%

If the Frequency Assignment authorizes TADIL-J Voice, add the below percentages to the above platforms transmitting TADIL-J Voice.

		Without Relay	With Relay
	Voice A	N/A	N/A
	Voice B	N/A	N/A

AAAUMD01A/USMC Network 5
 MARINE CORPS NETWORK DESIGN FACILITY
 NETWORK DESCRIPTION

Allocation Table - AAAUMD01A/USMC Network 5

SB / Agg	Net Req.	Net	Set	Idx	RRN
1.1	0	0	B	31	9
2.1	1	1	C	8	10
3.1	1	1	B	12	10
4.1	1	1	A	1	13
4.2	1	1	A	3	12
4.3	1	1	B	0	11
4.4	1	1	B	3	10
5.1	1	1	C	2	13
5.2	1	1	A	7	12
5.3	1	1	C	4	11
5.4	1	1	B	7	10
6.1	1	1	B	11	10
7.1	1	1	B	5	12
8.1	1	1	C	0	11
9.1	1	1	B	4	11
10.1	1	1	B	27	10
11.1	1	1	B	19	10
12.1	1	1	B	63	9
12.2	1	1	B	119	8
13.1	0	0	C	24	10
14.1	0	0	B	28	10
15.1	0	0	A	0	14
15.2	0	0	B	8	11
16.1	0	0	C	1	14
16.2	0	0	C	12	11
17.1	0	0	B	2	13
17.2	0	0	B	1	12

AAAUMD01A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

COMSEC Cross Reference Table - AAAUMD01A/USMC Network 5

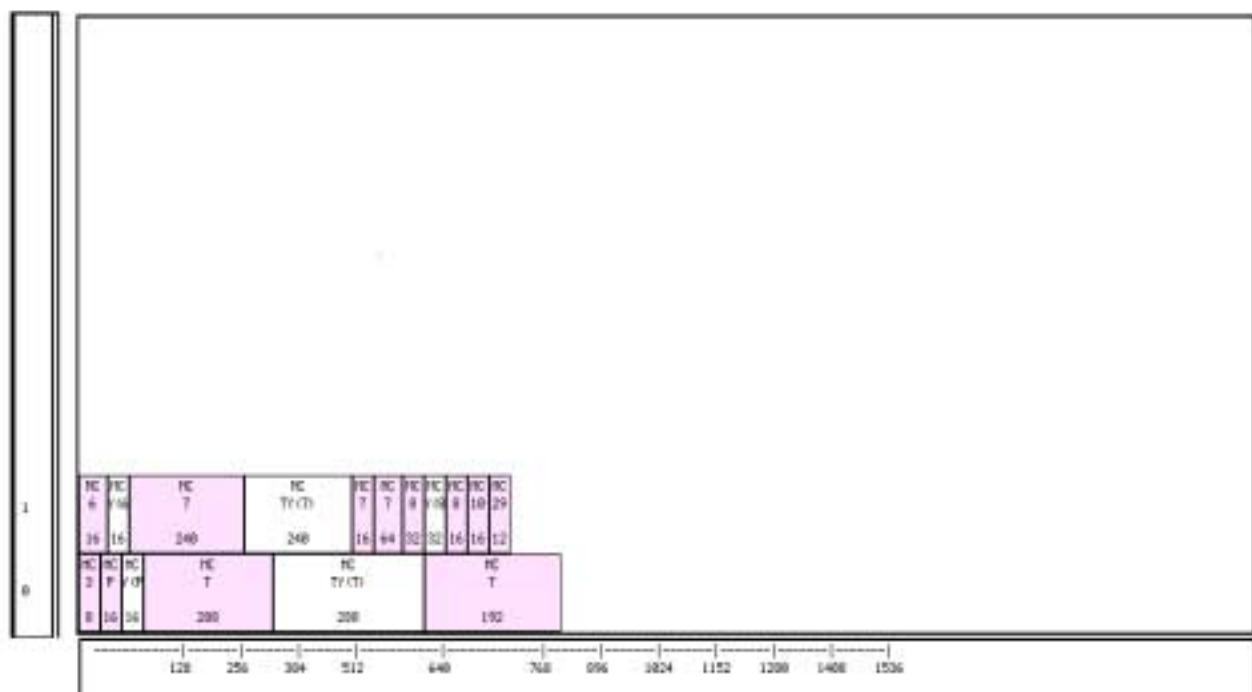
Default MSEC = 1		Default TSEC = 1			
SDU Locations					
Participant	0/1	2/3	4/5	6/7	Overflow
PAT_ICC(1)				1	
PAT_ICC(2)				1	
PAT_ICC(3)				1	
PAT_ICC(4)				1	
PAT_ICC(5)				1	
PAT_ICC(6)				1	
THAAD_TOC(1)				1	
FAAD(1)				1	
FAAD(2)				1	
E3(1)				1	
E3(2)				1	
E3I(1)				1	
E3I(2)				1	
JSTARS(1)				1	
ADCP(1)	1				
AMDPCS(1)				1	
CEES(1)				1	

AAAUMD01A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Time Line – AAAUMD01A/USMC Network 5

Time Line Display Status: CREATED

Nets



Total Slots/Frame

Note: Not to scale

AAAUMD01A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

NDL File Name Table

Platforms referenced in the below table correspond with specific NDL file names or Network file identification numbers for each respective participant platform.

Network Platform Name By Service		File Name/Network Used By Host System
Marine Corps		
ADCP	ADCP(1)	ADCP1_5.PF

AAAUMD01A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

APPENDIX B -- AAAUMD01A/USMC Network 5

SHORT FORM REPORT FOR ADCP (1)

AAAUMD01A/USMC Network 5
MARINE CORPS NETWORK DESIGN FACILITY
NETWORK DESCRIPTION

Participant ADCP(1)

Participant	Block Id. No.	Slot Type	Msg Cat	Total Slots Req'd	Slot Blocks Req'd	Slot Group A=Ag g	Slot Grou p Elem.	Set	Index	RRN	Net	Relay Delay
ADCP(1)	1	T	3	8	8	1.1	0	B	31	9	0	0
	2	T	6	1	1	2.1	13	C	104	6	1	0
	3	T	7	24	16	4.2	10	A	19	10	1	0
	4	T	7		8	4.4	10	B	35	9	1	0
	5	T	8	4	4	8.1	7	C	48	8	1	0
	6	T	10	4	4	11.1	4	B	115	8	1	0
	7	T	30	1	1	13.1	15	C	248	6	0	0
	8	R	6	16	16	2.1	0	C	8	10	1	0
	9	R	6	16	16	3.1	0	B	12	10	1	0
	10	R	7	240	128	4.1	0	A	1	13	1	0
	11	R	7		64	4.2	0	A	3	12	1	0
	12	R	7		32	4.3	0	B	0	11	1	0
	13	R	7		16	4.4	0	B	3	10	1	0
	14	R	7	240	128	5.1	0	C	2	13	1	0
	15	R	7		64	5.2	0	A	7	12	1	0
	16	R	7		32	5.3	0	C	4	11	1	0
	17	R	7		16	5.4	0	B	7	10	1	0
	18	R	7	16	16	6.1	0	B	11	10	1	0
	19	R	7	64	64	7.1	0	B	5	12	1	0
	20	R	8	32	32	8.1	0	C	0	11	1	11
	21	R	8	16	16	10.1	0	B	27	10	1	0
	22	R	10	16	16	11.1	0	B	19	10	1	0
	23	R	30	16	16	13.1	0	C	24	10	0	0
	24	R	30	16	16	14.1	0	B	28	10	0	0
	25	R	31	288	256	15.1	0	A	0	14	0	0
	26	R	31		32	15.2	0	B	8	11	0	0
	27	R	31	288	256	16.1	0	C	1	14	0	0
	28	R	31		32	16.2	0	C	12	11	0	0
	29	R	31	192	128	17.1	0	B	2	13	0	0
	30	R	31		64	17.2	0	B	1	12	0	0